

REMARKS

I. Introduction

Claims 10 and 12-18 are pending in the present application. Claim 10 has been amended.

Applicant notes with appreciation the acknowledgment of the claim for foreign priority and the indication that all of the certified copies of the priority documents have been received.

II. Rejection of Claims 10, 12, 14-16 and 18 Under 35 U.S.C. § 103(a)

Claims 10, 12, 14-16 and 18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,243,277 ("Sun") in view of U.S. Patent No. 5,986,354 ("Nagao"). Applicant respectfully submits that the rejection of pending claims 10, 12, 14-16 and 18 should be withdrawn for at least the following reasons.

In rejecting a claim under 35 U.S.C. § 103(a), the Examiner bears the initial burden of presenting a prima facie case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish prima facie obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. In re Merck & Co., Inc., 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). To the extent that the Examiner may be relying on the doctrine of inherent disclosure in support of the obviousness rejection, the Examiner must provide a "basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flow from the teachings of the applied art." (See M.P.E.P. § 2112; emphasis in original; see also Ex parte Levy, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)).

Amended claim 10 recites, in relevant parts, "a reserve energy accumulator to which a charging voltage higher than the at least one internal normal d.c. voltage is applied by the high-voltage vehicle electric system during regular operation, . . . and at least one step-down

regulator that steps down an input direct voltage applied thereto to the at least one internal normal d.c. voltage, wherein **the step-down regulator does not include an inductor**, and wherein in regular operation **the motor vehicle electric supply voltage is applied directly by the high-voltage vehicle electric system via a diode as the charging voltage to the reserve energy accumulator and is also applied via a diode as an input direct voltage to the step-down regulator**, and wherein the reserve voltage supplied by the reserve energy accumulator is applied directly as input direct voltage to the at least one step-down regulator in an emergency.” In this manner, amended claim 10 explicitly recites a circuit arrangement which is used in connection with a multi-voltage vehicle electrical supply system which provides two different voltage levels: internal normal DC voltage, and a **charging voltage** which is higher than the internal normal DC voltage. The “motor vehicle electric supply voltage is **applied directly by the high-voltage vehicle electric system** via a diode as the charging voltage,” i.e., the higher, charging voltage is not generated with the aid of any transformers or voltage converters. In regular operation, the charging voltage is supplied directly to both **the step-down regulator, which does not include an inductor**, and the reserve energy accumulator, such that the internal normal DC voltage is generated by the step-down regulator and the reserve energy accumulator is charged. In the Applicant’s invention, only a step-down voltage conversion is performed, so no step-up transformer of any sort is required, and this advantage is clearly reflected in the claimed feature that the “**the step-down regulator does not include an inductor.**”

In support of the rejection, the Examiner cites Sun as teaching the claimed “step-down regulator” feature of claim 10. In particular, the Examiner contends that “since the regulator 308 converts the supplied voltage to the level required for the load, if the level required for the load is lower than the supplied voltage, the regulator will act as a step-down regulator.” (Office Action, p. 3). However, directly contrary to the above-recited invention of amended claim 10, the DC-to-DC converter 308 of Sun clearly includes an inductor 402. In addition, Nagao clearly fails to remedy the above-noted deficiency of Sun with respect to the “step-down regulator” feature of claim 10.

For at least the foregoing reasons, claim 10 and its dependent claims 12, 14-16 and 18 are allowable over the combination of Sun and Nagao.

III. Rejection of Claims 13 and 17 Under 35 U.S.C. §103(a)

Claims 13 and 17 are rejected under 35 U.S.C. §103(a) as being unpatentable over Sun in view of Nagao, and further in view of U.K. Patent GB 2,246,648 ("Lieu"). Applicant respectfully submits that the rejection of pending claims 13 and 17 should be withdrawn for at least the following reasons.

In rejecting a claim under 35 U.S.C. § 103(a), the Examiner bears the initial burden of presenting a prima facie case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish prima facie obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. In re Merck & Co., Inc., 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). To the extent that the Examiner may be relying on the doctrine of inherent disclosure in support of the obviousness rejection, the Examiner must provide a "basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flow from the teachings of the applied art." (See M.P.E.P. § 2112; emphasis in original; see also Ex parte Levy, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)).


Claims 13 and 17 both ultimately depend on claim 10. As noted above with respect to parent claim 10, the combination of Sun and Nagao clearly fails to render amended claim 10 obvious. In addition, Lieu clearly fails to remedy the deficiencies of Sun and Nagao as applied against parent claim 10. Accordingly, dependent claims 13 and 17 are similarly not rendered obvious by the combination of Sun, Nagao and Lieu.

Conclusion

In light of the foregoing, Applicant respectfully submits that all of the pending claims 10 and 12-18 are in condition for allowance. Prompt reconsideration and allowance of the present application are therefore respectfully requested.

Respectfully submitted,

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